BANNARI AMMAN INSTITUTE OF TECHNOLOGY
An Autonomous Institution Affiliated to Anna University - Chennai, Accredited by NAAC with A+ Grade
Sathyamangalam - 638401 Erode District, Tamil Nadu, India

Student Name: SURESH B

Seat No : 405

Project ID: 9

Project title: (IQAC)Mailer BIT

Technical Components

COMPONENT	TECH STACK
Backend	Express,NodeJS
Frontend	React
Database	MongoDB
API	RESTful services

PROBLEM STATEMENT:

The decentralized nature of email communication within educational institutions leads to several challenges, including:

- **Inconsistent messaging:** Different departments and administrative units send emails independently, leading to duplication of information and inconsistent messaging.

- **Schedule conflicts:** Students and faculty receive multiple emails with overlapping schedules and events, leading to confusion and missed opportunities.
- **Fragmented communication:** Important announcements and updates get lost in the volume of emails, making it difficult for recipients to stay informed and engaged.

- **Administrative burden:** Managing email distribution lists, resolving conflicts, and ensuring timely delivery of critical information impose a significant administrative burden on staff and faculty.

PROJECT-FLOW:

Purpose:

To develop a centralized mailing system that efficiently manages communication regarding student schedules and activities, resolving existing issues of schedule conflicts and communication inconsistencies.

Scope:

This system includes user authentication, a mailer request form, conflict checks, and a real-time dashboard for viewing and managing schedules. It integrates with existing email systems to ensure scheduled and conflict-free messaging.

Business Context:

The centralized mailing system is aimed at enhancing communication clarity and timeliness across BIT, thus boosting organizational efficiency by minimizing scheduling conflicts. Primary stakeholders include students, faculty, administrative staff, and the IT department.

Consideration:

- All users possess active Google accounts for authentication.
- Users have regular access to internet-enabled devices.

Dependencies:

- Integration with Google OAuth for user authentication.
- Consistent performance and availability of the existing email server.

User personas:

- **Student:** Needs an up-to-date schedule to effectively plan activities.
- **Faculty:** Requires the ability to send out schedule updates and notices efficiently.
- **Admin Staff:** Manages system operations, resolves conflicts, and approves mail requests.

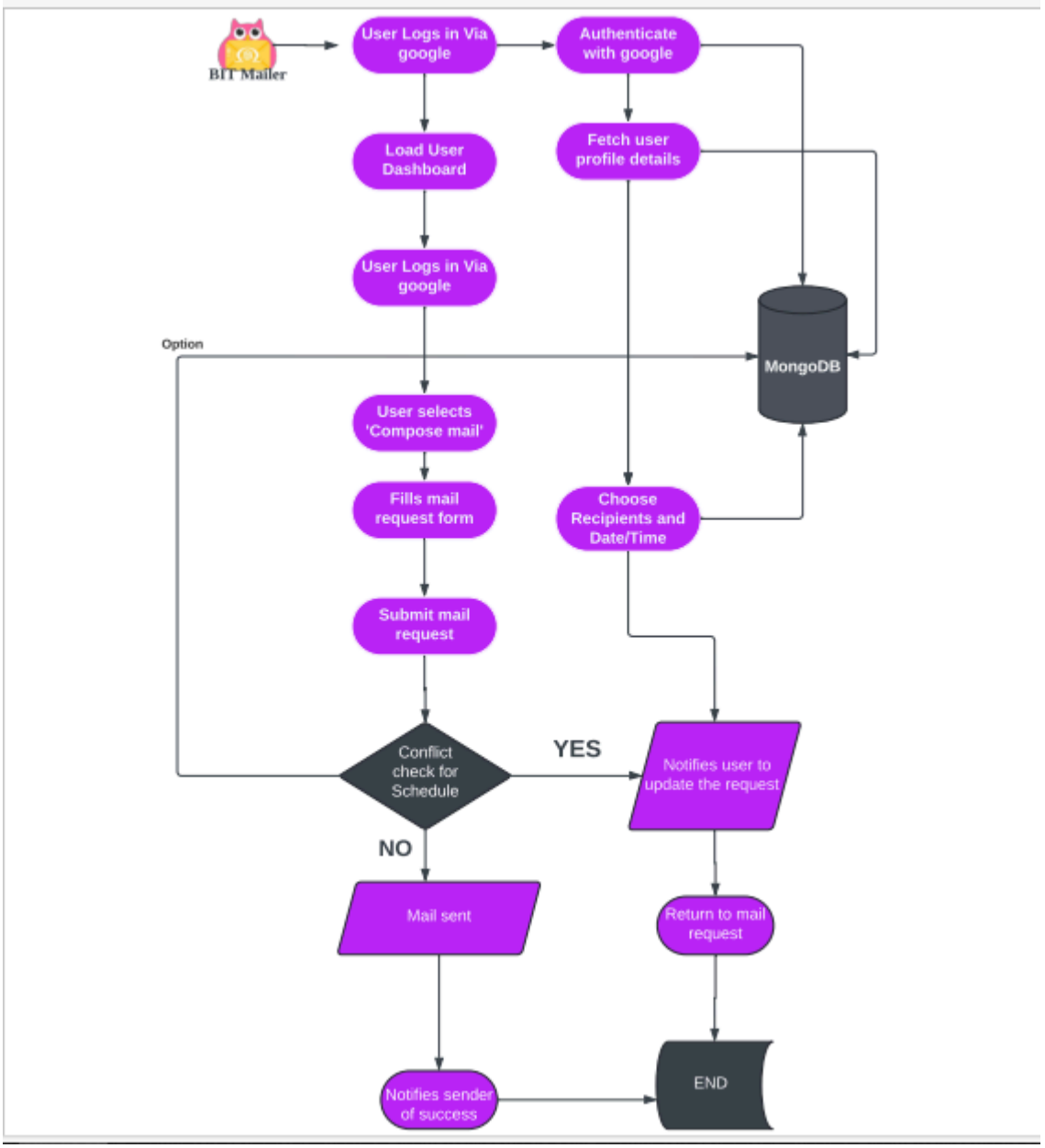
User Stories:

- As a student, I want to view a unified schedule of my classes and events to organize my day effectively.
- As a faculty member, I need to ensure my communications reach students without conflicting with their other scheduled activities.

Functional Requirements:

- **User Authentication:** Secure login using Google OAuth.
- **Mailer Request Form:** Users input mail content, scheduling time, category, and recipients.
- **Conflict Resolution:** Automatic detection of scheduling conflicts with options for adjustment.
- **Dynamic Dashboard:** Real-time schedule viewing and interaction.
- **Priority Algorithm:** Automated prioritization of communications based on rules.

FLOW CHART: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Authenticate with google
Load User Dashboard
Fetch user profile details
User Logs in Via google
MongoDB
Option
User selects 'Compose mail'
Fills mail request form
Choose Recipients and Date/Time
Submit mail request
Conflict check for Schedule
YES
Notifies user to update the request
NO
Mail sent
Return to mail request
Notifies sender of success
END